

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

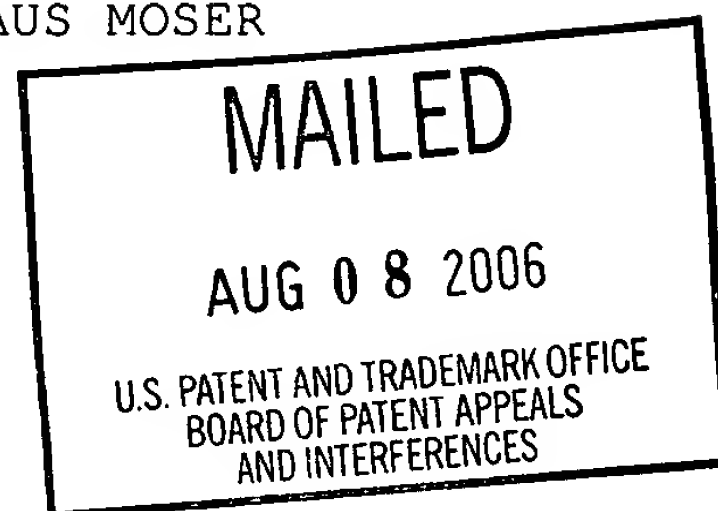
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**Ex parte** GUNNAR-MARCEL KLEIN and NIKOLAUS MOSER

Appeal No. 2006-1743  
Application No. 09/555,140

HEARD: JULY 12, 2006



Before WALTZ, KRATZ and FRANKLIN, **Administrative Patent Judges**.

WALTZ, **Administrative Patent Judge**.

**DECISION ON APPEAL**

This is a decision on an appeal from the primary examiner's refusal to allow claims 13, 15 through 22, 35 and 36 as amended subsequent to the final rejection (see the amendment filed Aug. 8, 2005, accompanying the Brief, entered as per ¶(10) on page 7 of the Answer). Claims 25 through 34 are the only other claims pending in this application but stand withdrawn from consideration as directed to a non-elected invention (Brief, page 2). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to a filter element composed of a plurality of filter medium layers of successively increasing degree of separation and decreasing

Appeal No. 2006-1743  
Application No. 09/555,140

storage capacity commencing with an inflow layer of a melt-blown nonwoven web and ending with a discharge layer of a predominantly cellulose containing compressed filter paper (Brief, page 2).

Further details of the invention may be gleaned from representative independent claim 13 as reproduced below:

13. A filter element comprising a plurality of filter medium layers joined together such that a fluid to be filtered flows successively through the layers in a flow direction commencing with an inflow layer and ending with a discharge layer, wherein successive layers in said flow direction exhibit an increasing degree of separation and a decreasing storage capacity for particles to be filtered out of said fluid, and wherein said inflow layer is comprised of synthetic fibers of a melt-blown nonwoven web with a fiber diameter of about 2  $\mu\text{m}$  or less and a weight per unit area of about 15 to 150  $\text{g}/\text{m}^2$ , and said discharge layer is comprised of a predominantly cellulose-containing pre-compressed filter paper having a weight per unit area of about 50 to 200  $\text{g}/\text{m}^2$ .

The examiner has relied on the following references as evidence of obviousness:

Sabee	4,910,064	Mar. 20, 1990
Kadoya	4,976,858	Dec. 11, 1990
Klimmek et al. (Klimmek)	0338479	Oct. 25, 1989
(published European Patent Application) <sup>1</sup>		

---

<sup>1</sup>We rely upon and cite from a full English translation of this document, previously made of record.

Appeal No. 2006-1743  
Application No. 09/555,140

Ryoichi et al. (Ryoichi) 06-198108  
(published Japanese Patent Application)<sup>2</sup>

Jul. 19, 1994

The following rejections are before this merits panel for review in this appeal:

(1) claim 36 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement (Answer, page 3);

(2) claims 13, 15-22, 35 and 36 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite (Answer, page 4);

(3) claims 13, 15-17, 21, 35 and 36 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kadoya in view of Sabee or Togashi (*id.*);

(4) claims 18-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the references as applied in rejection (3) further in view of appellants' admission (Answer, page 6); and

(5) claim 22 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the references as applied in rejection (3)

---

<sup>2</sup>We note that the examiner erroneously lists this document as "Togashi" (Answer, page 3). We refer to this document by its proper name. We also rely upon and cite from a machine assisted English translation of this document. We note that the examiner has promised to provide a full English translation "at a later date" (Answer, page 11) but the record fails to include such a translation.

further in view of Klimmek (Answer, page 7).

In view of the totality of the record, we cannot sustain any of the rejections on appeal, essentially for the reasons stated in the Brief, Reply Brief, as well as those reasons set forth below. Accordingly, the decision of the examiner is reversed.

#### OPINION

##### *A. The Rejection under § 112, ¶2*

When deciding rejections based on paragraphs one and two of section 112, it is proper to first review the propriety of the rejection for indefiniteness under the second paragraph. See *In re Angstadt*, 537 F.2d 498, 501, 190 USPQ 214, 217 (CCPA 1976).

The examiner finds that it is unclear as to what range the word "about" implies, with respect to claims 13 and 35, and similarly what range is "at least about" implies with regard to claim 36 (Answer, page 4).<sup>3</sup> The examiner finds that appellants' specification and the cited prior art fails to disclose the ranges implied by these words or terms (Answer, page 9).

---

<sup>3</sup>The examiner does not mention the other claimed occurrences of the word "about" in claims 13, 35 and 36 ("about 2  $\mu\text{m}$  or less" and "a weight per unit area of about 15 to 150  $\text{g}/\text{m}^2$ "), and thus we presume the examiner's rejection pertains only to the word "about" or "at least about" as these terms modify the weight per unit area of the discharge layer.

Appeal No. 2006-1743  
Application No. 09/555,140

The initial burden of proof in establishing a rejection based on any statutory ground rests with the examiner. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The legal standard for definiteness of claim language is whether a claim reasonably apprises those of skill in the art of its scope. See *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The examiner has not met the initial burden by establishing that one of ordinary skill in this art would not be apprised of the scope of the term "about" or "at least about," with regard to the weight per unit area of cellulose-containing filter paper in the discharge layer (see the Brief, page 8, first paragraph). See *In re Woodruff*, 919 F.2d 1575, 1577, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); *Eiselstein v. Frank*, 52 F.3d 1035, 1040, 34 USPQ2d 1467, 1471 (Fed. Cir. 1995).

For the foregoing reasons and those stated in the Brief and Reply Brief, we determine that the examiner has not established that the recited claim language is indefinite. Therefore we reverse the rejection of claims 13, 15-22, 35 and 36 under the second paragraph of section 112.

*B. The Rejection under § 112, ¶1*

The examiner finds that the limitation of the discharge layer having a weight per unit area of "at least about 50 g/m<sup>2</sup>"

Appeal No. 2006-1743  
Application No. 09/555,140

as recited in claim 36 on appeal is considered "new matter"

(Answer, paragraph bridging pages 3-4). The examiner finds that none of the weight ranges for the filter paper layer as recited in the original specification and claims are "open-ended"

(Answer, page 8). Therefore the examiner finds no support in the original disclosure for ranges above the originally supported "approximately 50 to 200 g/m<sup>2</sup>" (*id.*).

As correctly argued by appellants (Brief, pages 6-7; Reply Brief, page 2), appellants disclose that "[a]dvantageous embodiments" include filter paper with "about 50 to 200 g/m<sup>2</sup>" weight per unit area (specification, page 4, second full paragraph). However, as recited in the original specification and claims, appellants do not limit their invention to this "advantageous embodiment" but only recite the weight per unit area as in "advantageous embodiment" and in dependent claims. Therefore, on this record, the evidence conveys to one of ordinary skill in this art that appellants were in possession of the invention as now claimed, i.e., weight per unit area values greater than 200 g/m<sup>2</sup>. See *In re Wertheim*, 541 F.2d 257, 265-66, 191 USPQ 90, 99 (CCPA 1976).

For the foregoing reasons and those stated in the Brief, we determine that appellants have adequately rebutted the examiner's

determination that the range of "at least about 50 g/m<sup>2</sup>" was new matter. See *In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996). Therefore we reverse the rejection of claim 36 under paragraph one of section 112.

*C. The Rejections over Prior Art under § 103(a)*

The examiner finds that Kadoya discloses a filter element having a plurality of layers joined together, the successive layers in the flow direction exhibiting an increasing degree of separation and a decreasing degree of storage capacity, where the inflow layer is made from synthetic fibers of a non-woven web and the discharge layer comprising a predominantly cellulose containing filter paper (Answer, paragraph bridging pages 4-5). The examiner finds that Kadoya fails to specify the non-woven web as being "melt-blown" with a fiber diameter of 2 microns or less (Answer, page 5). Therefore the examiner applies *Sabee* or *Ryoichi* for the teaching of advantageous results in filter mediums when using a non-woven fabric formed by a melt blowing process with fibers having a diameter of 2 microns or less (Answer, page 5). From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to have modified the filter of Kadoya to include an inflow layer formed of a melt-

Appeal No. 2006-1743  
Application No. 09/555,140

blown non-woven web in order to provide a web having uniform porosity (Sabee) or to improve the dust holding capacity of the filter (Ryoichi) (*id.*).

As correctly argued by appellants (Brief, pages 12-14; Reply Brief, pages 4-7), on this record the examiner has failed to establish that several limitations required by the claims on appeal were disclosed or obvious from the disclosure and teachings of the applied prior art references. The examiner has not established, on the facts on this record, that there is sufficient evidence that the filter element of Kadoya "inherently" has successive layers that exhibit a "decreasing storage capacity" for particles to be filtered as required by the claims on appeal (Answer, paragraph bridging pages 9-10). See *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (inherency requires that the results necessarily flow from the reference disclosure, and are not merely a possibility or probability). Thus, although Kadoya does disclose that larger particles are trapped in the inflow nonwoven fabric layer which has a lower fiber density (abstract; col. 1, ll. 58-61; col. 2, ll. 18-21; and col. 3, ll. 20-30), the examiner has not established that it logically follows that the storage capacity of the nonwoven fabric layer for all filtered particles is higher



than that of the filter paper discharge layer. The examiner has not provided any convincing technical reasoning to rebut appellants' argument that the storage capacities of the filter layers of Kadoya cannot be calculated based on the data disclosed by this reference (Brief, pages 12-14; Reply Brief, pages 6-7).

Additionally, we agree with appellants that the examiner has not established that the filter layers (5a and 5b) of Kadoya have decreasing porosities (Answer, page 12; see the Brief, pages 8-9) nor can the examiner assume the drawings of the Kadoya reference are drawn to scale regarding the thickness of each layer (Answer, pages 9 and 12; Brief, page 13). See *Nystrom v. Trex Co.*, 424 F.3d 1136, 1149, 76 USPQ2d 1481, 1491 (Fed. Cir. 2005) (Proportions of the drawings cannot be relied upon in absence of specification disclosure).

The examiner has applied Sabee and Ryoichi for their teachings of using melt-blown webs as non-woven fabrics in filter elements (Answer, page 5). Thus these references do not remedy the deficiencies found in Kadoya.

For the foregoing reasons and those stated in the Brief and Reply Brief, we determine that the examiner has not established a *prima facie* case of obviousness in view of the reference evidence. Therefore we reverse the examiner's rejection of

Appeal No. 2006-1743  
Application No. 09/555,140

claims 13, 15-17, 21, 35 and 36 under section 103(a) over Kadoya in view of Sabee or Ryoichi.

The two remaining rejections based on section 103(a) additionally rely on appellants' admission regarding methods of fusing the filter layers (Answer, page 6) and Klimmek's teaching regarding the use of glass fibers to increase the strength of the paper layer (Answer, page 7). Accordingly these additional references fail to remedy the deficiencies in Kadoya as discussed above. Therefore we cannot sustain the remaining rejections on appeal based on section 103(a).

*D. Summary*

The rejection of claim 36 under 35 U.S.C. § 112, first paragraph, is reversed. The rejection of claims 13, 15-22, 35 and 36 under the second paragraph of 35 U.S.C. § 112 is also reversed.

The rejection of claims 13, 15-17, 21, 35 and 36 under 35 U.S.C. § 103(a) over Kadoya in view of Sabee or Ryoichi is reversed. Similarly, the rejections over these references further in view of appellants' admission or Klimmek are also reversed.

Appeal No. 2006-1743  
Application No. 09/555,140

The decision of the examiner is reversed.

**REVERSED**

THOMAS A. WALTZ

THOMAS A. WALTZ  
Administrative Patent Judge

Robt F. Knud

PETER F. KRATZ  
Administrative Patent Judge

Benny A. Kravitz

BEVERLY A. FRANKLIN  
Administrative Patent Judge

BOARD OF PATENT  
APPEALS AND  
INTERFERENCES

TAW/hh

Appeal No. 2006-1743  
Application No. 09/555,140

CROWELL & MORING, LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, D.C. 20044-4300